

In response to the Office Action dated April 7, 2001, the Applicants wish to submit the following remarks.

REMARKS

Claims 1-11 are pending in the application. The Examiner has rejected claims 1 and 2 under 35 USC § 102(b) as anticipated by the teachings of the Nakamura patent (U.S. Patent No. 5,818,403), and has rejected Claims 3-11 as unpatentable over the combined teachings of Nakamura and the Baldi patent (U.S. Patent No. 5,708,451). Applicants respectfully disagree for the reasons set forth below.

With regard to the rejection of Claims 1 and 2 as anticipated by Nakamura, Applicants again assert that the Nakamura reference does not teach a matrix addressed display device comprising a cathode means, grid electrode means comprising a first plurality of parallel row conductors and a second plurality of parallel column conductors arranged orthogonally to the row conductors; characterized in that the display device further comprises means for providing cut-off correction information to a one of said first or said second plurality of parallel conductors, as is specifically recited in independent Claim 1, and all of the remaining claims which depend therefrom.

Under the present invention, as taught and claimed, cut-off correction information (and, optionally, gain correction information) is provided to one of a first plurality of parallel conductors (e.g., rows) or a second plurality of parallel conductors (e.g., columns) along with the drive voltage information which is being provided to those conductors based on the image display desired. As set forth in the teachings found from lines 11-27 on page 12 of the Specification, "[w]hen a particular column driver is not selected, the column grid conductor...is driven to a non-selected voltage, that is a voltage below cut-off" and "when a column driver 502 is selected...[it is] driven to a cut-off voltage" and "[t]he level of drive to the...conductors is determined by the pixel data...and the correction data 516 supplied from...memory. The correction data 516 consists of cut-off and gain corrections."

Clearly, therefore, what is being taught and claimed is a method and apparatus whereby not only the image information (e.g., cut-off voltage or a voltage below cut-off), but also correction information is being supplied to a set of the conductors. Applicants assert that the Nakamura patent does not teach or suggest such a method and apparatus, alone or in combination with the Baldi patent teachings.

The Nakamura patent teaches a driving method for an electron beam generation system with image forming apparatus associated therewith. The Nakamura method comprises alternately applying information signals to odd-numbered columns of electrodes while applying cut-off signals to the even-numbered columns of electrodes, and then reversing the process to apply information signals to even-numbered columns of electrodes while applying cut-off signals to the odd-numbered columns of electrodes (see: e.g., Col. 5, line 65 through Col. 6, line 5). The Nakamura "cut-off" signals comprise non-information signals which are applied to non-selected columns (e.g., the even columns) so that the electrodes (e.g., the odd columns) which are receiving information signals "are not adversely affected by the voltage applied to the adjacent modulation electrodes (see: Col. 5, lines 41-50)." Clearly the non-information signals of Nakamura cannot be said to anticipate the correction plus drive voltage signals which are being provided to all of the plurality of columns (or rows) under the present invention. Nakamura does not teach or suggest the provision of correction signals and information signals to conductors. In addition, Nakamura does not teach or suggest that all of the plurality of rows or all of the plurality of columns be provided with the same signals. Since all of the pending claims recite means for providing correction information, Applicants respectfully assert that the claims are not anticipated by the Nakamura patent teachings.

As set forth in the previously-submitted amendment, for a reference to anticipate claim language under 35 USC §102(b), that reference must teach each and every feature which is recited in the claim. Since the Nakamura reference does not teach means for providing cut-off correction information, nor does it teach that the means provide cut-off correction information to one of the first plurality of parallel conductor rows or the second plurality of parallel conductor columns, it cannot be maintained that the Nakamura patent anticipates each and every claim feature. As such, Applicants request that the anticipation rejection based on the teachings of the Nakamura reference be withdrawn.

Applicants also point out that the teachings of the Nakamura reference cannot be said to obviate the invention as claimed, alone or in combination with the additionally-cited Baldi patent teachings. The Nakamura teachings of applying different signals to adjacent conductors (i.e., information signals to the even columns and cut-off signals to the odd columns) would never motivate one skilled in the art to provide multiple signals to a single column, let alone to provide the same multiple signals to all of the conductors in adjacent columns. In fact, Nakamura teaches away from such when it states that alternate information and cut-off signals must be applied to adjacent columns in order to avoid the adverse effects of having voltages applied to adjacent conductors (Col. 5, lines 41-50). Clearly, the Nakamura

patent teachings cannot be said to obviate the invention as claimed.

Moreover, Applicants respectfully assert that the combination of teachings of Nakamura and Baldi would not obviate the claim language. Applicants first submit that one having skill in the art would not be motivated to combine the teachings of the two references. While the two references are in the same field of technology, one would not take the Nakamura system, with its disclosure of alternate column signals which teaches away from providing the same signals to adjacent conductors, and modify it with the Baldi patent teachings wherein a single circuit may supply the same single signal to all columns.

The Baldi patent teaches several circuit arrangements for supplying a single signal to column conductors in a matrix. Each of the circuit arrangements provided by the Baldi patent has one or more correction circuits which take both the drive voltage and a correction signal and output a single signal to one or more columns. As with Nakamura, only one signal is being provided to any given column. Therefore, even if one were to modify the Nakamura patent teachings with those of Baldi, one would not arrive at the invention as claimed. If one were to combine the teachings of the Nakamura and Baldi patents, the resulting system would include (a) at least one correction circuit for receiving a drive signal plus a correction signal and for outputting a single combined signal (i.e., the information signal of Nakamura) to a

first set of columns (e.g., the even columns) and (b) the cut-off signal circuitry of Nakamura for providing a cut-off signal to the alternate set of columns (e.g., the odd columns). Clearly, therefore, even if one were motivated to combine the references, one would not arrive at the invention as set forth in the pending claims.

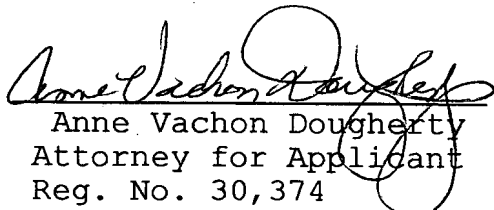
It is again noted that the Nakamura method is directed to alternately applying signals to the odd and even numbered columns. Clearly one would not be motivated by the Nakamura teachings to apply any signal to all of a plurality of columns or rows of conductors. To suggest that the current be applied to all rows or columns would render the Nakamura teachings unworkable, since applying the signals to all neighboring rows would be inconsistent with the Nakamura teaching of alternate application of voltage to reduce negative effects. Clearly the Nakamura reference does not include any suggestion of such application of information to all rows or all columns. Moreover, since to modify the Nakamura teachings to apply the information to all rows or all columns would make it unworkable for its intended purpose, such could not be considered obvious. It is well established under U.S. Patent Law that modification of teachings cannot be considered obvious to one having skill in the relevant art if such modification would render the teachings unworkable for their intended purpose. Clearly, therefore, it cannot be maintained that the teachings of the Nakamura

reference, alone or in combination with the teachings of the Baldi patent, obviate the invention as claimed.

Based on the foregoing amendments and remarks, Applicants request withdrawal of the rejections and issuance of the claims.

Respectfully submitted,  
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